

Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the Federal Biobased Product Preferred Procurement Program (FB4P). This summary reflects data available as of July 26, 2006. Additional biobased information added on April 2, 2007.

Title: Biobased Cutlery

Description: Hand utensils made from biobased materials and used for preparing, serving, and eating food.

Manufacturers Identified: 7 manufacturers producing Biobased Cutlery have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies producing Biobased Cutlery:

- American Conference of Governmental Industrial Hygienists
- packexpo.com
- Biobased Manufacturers Association
- United Soybean Board

Commercially Available Products Identified: Of the manufacturers identified, 12 Biobased Cutlery are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 1 Biobased Cutlery.

Industry Performance Standards: Product information submitted by biobased manufacturers indicate that have typically been tested to the following industry standards:

- American Society for Testing and Materials #D5338 Standard Test Method for Determining Aerobic Biodegradation of Plastic Materials Under Controlled Composting Conditions
- American Society for Testing and Materials #D6400-04 Standard Specification for Compostable Plastics
- Deutsches Institut für Normung, the German Institute for Standardization #DIN CERTCO 54900 Standard for testing the compostability of polymeric materials

Samples Tested for Biobased Content: 5 samples of Biobased Cutlery have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

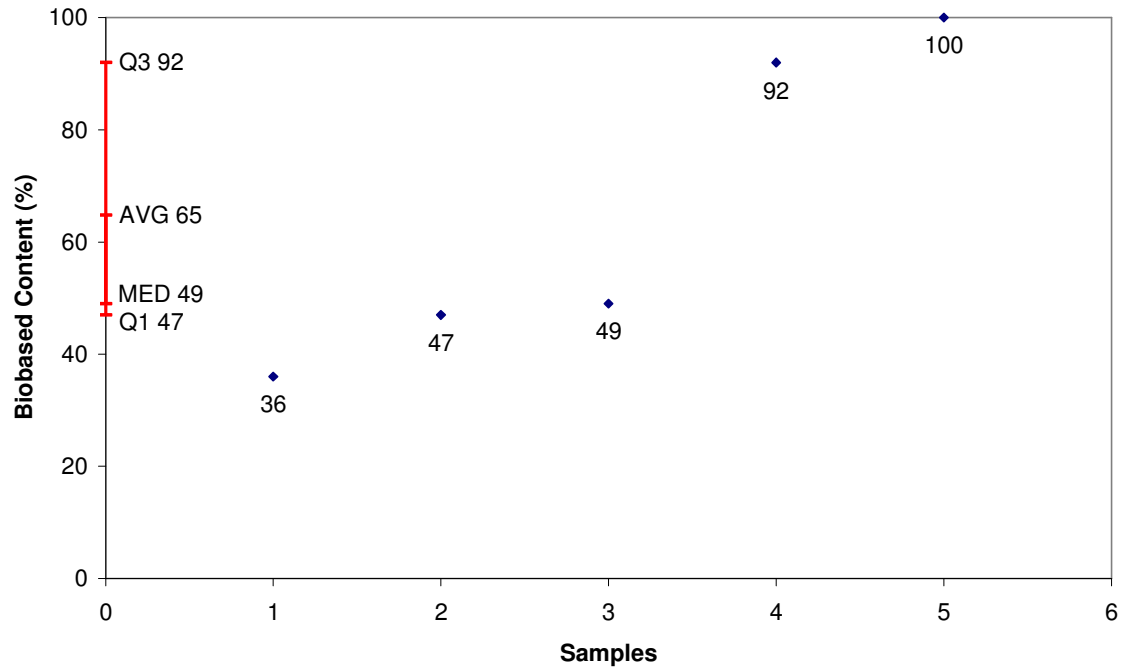
Biobased Content Data: Results from biobased content testing of Biobased Cutlery indicate a range of content percentages from 36% minimum to 100% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 3 Biobased Cutlery have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Biobased Cutlery range from \$32.00 minimum to \$32.00 maximum per usage unit. The environmental scores range from 0.0565 minimum to 0.0690 maximum. A detailed summary of the BEES results is included as Appendix B.

Appendix A - Biobased Content Data

Biobased Cutlery

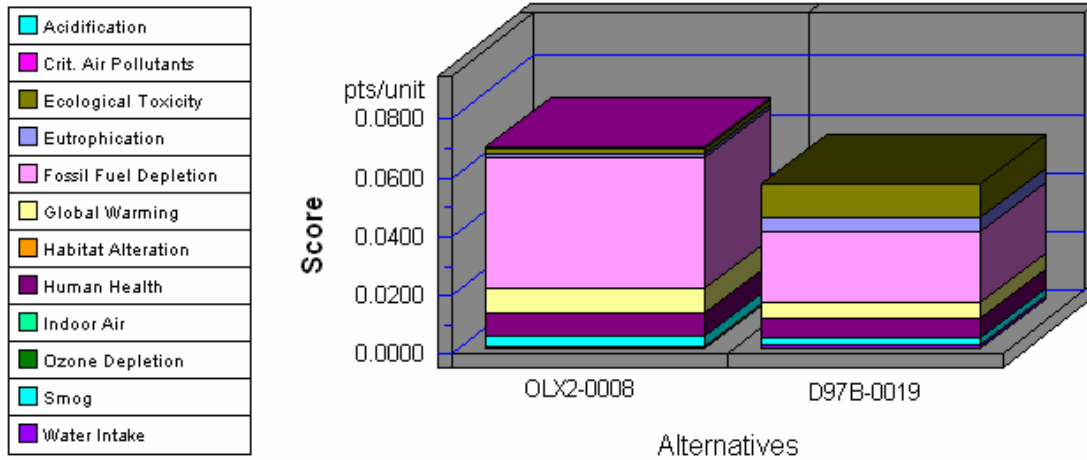


	Manufacturers Identified	Products Identified	C14	BEES
1	D97B	D97B-0018	36	yes
2	OLX2	OLX2-0008	47	yes
3	D97B	D97B-0017	49	yes
4	PXO9	PXO9-0005	92	
5	PXO9	PXO9-0006	100	

Appendix B - BEES Analysis Results

Functional Unit: 1000 pieces of cutlery

Environmental Performance

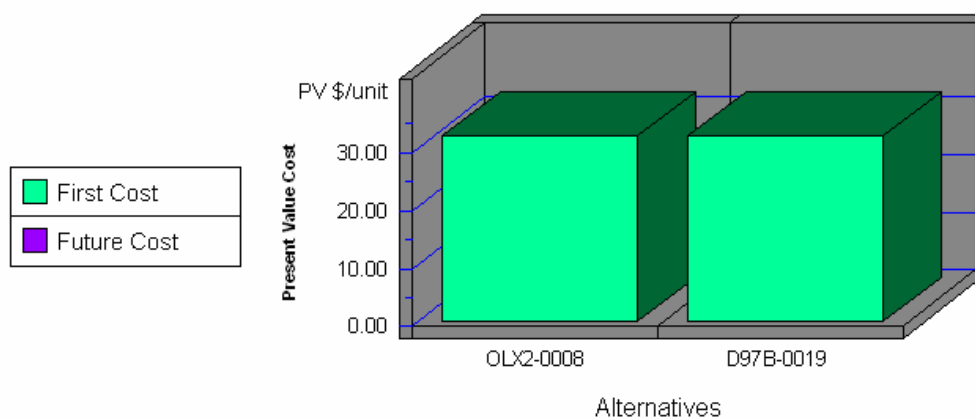


Note: Lower values are better

Category	OLX2-0008	D97B-0019
Acidification--5%	0.0000	0.0000
Crit. Air Pollutants--6%	0.0005	0.0002
Ecolog. Toxicity--11%	0.0021	0.0113
Eutrophication--5%	0.0014	0.0052
Fossil Fuel Depl.--5%	0.0440	0.0236
Global Warming--16%	0.0085	0.0056
Habitat Alteration--16%	0.0000	0.0000
Human Health--11%	0.0079	0.0065
Indoor Air--11%	0.0000	0.0000
Ozone Depletion--5%	0.0000	0.0000
Smog--6%	0.0035	0.0024
Water Intake--3%	0.0011	0.0017
Sum	0.0690	0.0565

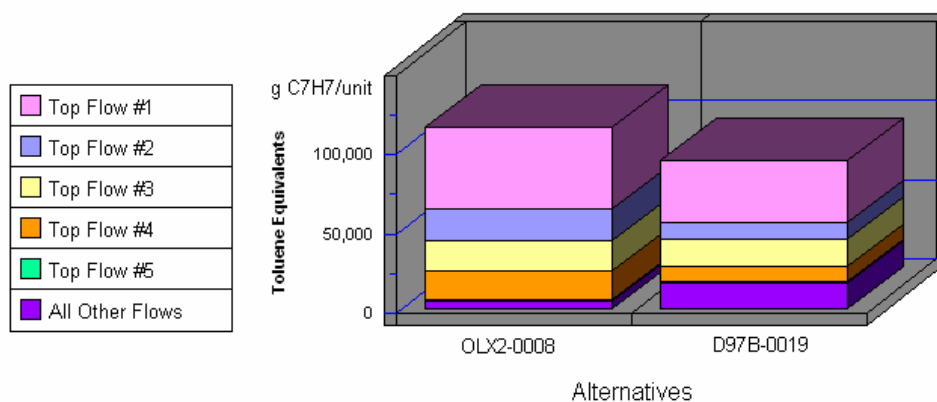
Appendix B (continued)

Economic Performance



*No significant/quantifiable durability differences were identified among competing alternatives. Therefore, future costs were not calculated.

Human Health by Sorted Flows*



Note: Lower values are better

Category	OLX2-0008	D97B-0019
Cancer--(w) Phenol (C6H5OH)	51,475.56	38,807.12
Cancer--(a) Dioxins (unspecifie	19,797.31	10,721.95
Cancer--(w) Arsenic (As3+, As5+	18,759.39	16,986.71
Cancer--(a) Arsenic (As)	18,256.61	9,722.87
Noncancer--(a) Mercury (Hg)	1,388.30	650.82
All Others	4,841.41	16,668.82
Sum	114,518.57	93,558.29

*Sorted by five topmost flows for worst-scoring product